

Remarks

Applicants respectfully request reconsideration of this application as amended. Claim 36 has been amended. No claims have been cancelled. Therefore, claims 19-37 are present for examination.

Claims 19-21, 25-30 and 35-36 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Klein (U.S. Patent No. 6,567,864) and Jones et al. (U.S. Patent No. 5,619,723) and Thompson et al. (U.S. Patent No. 6,341,342) and further in view of Klein et al. (U.S. Patent No. 5,671,439).

Applicants submit that the present claims are patentable over any combination of Klein ('864), Jones, Thompson, and Klein ('439). Klein ('864) discloses a ROM BIOS that is coupled to an I/O bus, which provides various well-known instruction sets to the microprocessor. Included instructions are the start-up routines for POST, system configuration initialization, and disk boot. The ROM BIOS also includes hardware interrupt handling and program service request handling routines. See Klein ('864) col. 3, ll. 52-59. Klein ('864) further discloses BIOS routines that cause the microprocessor to initiate a DMA transfer of the drive description data from each of the IDE devices to the system DRAM. See Klein ('864) col. 4, ll. 50-53.

Jones discloses a system and a method where each of the disk drives have an IDE (ATA) interface plus an on-board data separator, buffer, and disk controller; and each disk drive may hold 200 MB of formatted data so that the array appears as a single 1,000 MB of memory to the host. Communication from controller to each of disk drives is a simple 40 line cable with signal assignments mostly analogous to those of an AT I/O channel. See Jones col. 14, ll. 32-38.

Further, Thompson discloses an array controller, SCSI ports, and SCSI buses and hard disk drives that are provided in a separate storage box. The computer system includes peripheral bus such as PCI, ISA, EISA, etc. The peripheral bus includes a plurality of slots. A controller card is plugged into one slot for interfacing the peripheral bus to the array controller via a bus or channel. See Thompson col. 6, ll. 44-53.

Lastly, Klein ('439) discloses means for alternately transferring even-numbered blocks of physical sectors between a on-board memory of a first drive and a main processing system and transferring odd-numbered blocks of physical sectors between the on-board memory of a second drive and the main processing system. See Klein ('439) col. 4, ll. 36-41.

Claim 19 of the present application recites that the data written to and read from the first and second disk drives is interleaved so that even sectors are accessed on the first disk drive and odd sectors are accessed on the second disk drive. Applicants submit that none of the above-cited references disclose or suggest such a feature. In particular, nowhere in Klein ('439) is there disclosed that data written to and read from the first and second disk drives is interleaved so that even sectors are accessed on the first disk drive and odd sectors are accessed on the second disk drive. Instead, Klein ('439) discloses alternately transferring even-numbered blocks of physical sectors between the on-board memory of the first drive and the main processing system and transferring odd-numbered blocks of physical sectors between the on-board memory of the second drive and the main processing system. Since blocks contain a plurality of sectors and therefore inherently contain both even and odd numbered sectors, alternating even-numbered and odd-numbered blocks of sectors between drives is not equivalent to alternating only even-numbered and odd-numbered sectors between drives.

Similarly, Klein ('864), Jones, and Thompson also fail to disclose or suggest data written to and read from a first and second disk drives is interleaved so that even sectors are accessed on a first disk drive and odd sectors are accessed on a second disk drive. Since none of the cited references disclose or suggest such a feature, any combination of Klein ('439), Klein ('864), Jones, and Thompson would not disclose or suggest the feature. Therefore, claim 19 is patentable over Klein ('864), Jones, and Thompson in further view of Klein ('439).

Claims 20-24 depend on claim 19 and contain additional features, therefore claims 20-24 are also patentable over Klein ('864), Jones, and Thompson in further view of Klein ('439).

Claim 25 discloses that the data written to and read from the first and second disk drives is interleaved so that even sectors are accessed on the first disk drive and odd sectors are accessed on the second disk drive. Thus, for reasons described above with respect to claim 19, claim 25 is also patentable over Klein ('864), Jones, and Thompson in further view of Klein ('439). Since claims 26 and 27 depend on claim 25 and contain additional features, claims 26 and 27 are also patentable over Klein ('864), Jones, and Thompson in further view of Klein ('439).

Claim 28 discloses that the data written to and read from the first and second disk drives is interleaved so that even sectors are accessed on the first disk drive and odd sectors are accessed on the second disk drive. Thus, for reasons described above with respect to claim 19, claim 28 is also patentable over Klein ('864), Jones, and Thompson in further view of Klein ('439). Since claims 29-34 depend on claim 28 and contain additional features,

claims 29-34 are also patentable over Klein ('864), Jones, and Thompson in further view of Klein ('439).

Claim 35 discloses that the data written to and read from the first and second disk drives is interleaved so that even sectors are accessed on the first disk drive and odd sectors are accessed on the second disk drive. Thus, for reasons described above with respect to claim 19, claim 35 is also patentable over Klein ('864), Jones, and Thompson in further view of Klein ('439). Since claims 36 and 37 depend on claim 35 and contain additional features, claims 36 and 37 are also patentable over Klein ('864), Jones, and Thompson in further view of Klein ('439).

Claims 22, 31 and 34 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Klein (U.S. Patent No. 6,567,864) and Jones et al. (U.S. Patent No. 5,619,723) and Thompson et al. (U.S. Patent No. 6,341,342) and Klein et al. (U.S. Patent No. 5,671,439) and further in view of Anderson (U.S. Patent No. 5,905,910).

Applicants submit that the present claims are patentable over any combination of Klein ('864), Jones, Thompson, Klein ('439), and Anderson. Anderson discloses a process of data transfers alternating between the first disk drive and the second disk drive. See Anderson col. 12, ll. 18-20. However, Anderson does not suggest or disclose data written to and read from the first and second disk drives is interleaved so that even sectors are accessed on the first disk drive and odd sectors are accessed on the second disk drive.

As discussed above, Klein ('864), Jones, Thompson, and Klein ('439) do not suggest or disclose data written to and read from the first and second disk drives is interleaved so that even sectors are accessed on the first disk drive and odd sectors are accessed on the second disk drive, any combination of Klein ('864), Jones, Thompson, Klein ('439), and Anderson

would also not suggest or disclose data written to and read from the first and second disk drives is interleaved so that even sectors are accessed on the first disk drive and odd sectors are accessed on the second disk drive. Therefore, the present application is patentable over Klein ('864), Jones, Thompson, and Klein ('439) in further view of Anderson.

Claims 23, 24, 32 and 33 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Klein (U.S. Patent No. 6,567,864) and Jones et al. (U.S. Patent No. 5,619,723) and Thompson et al. (U.S. Patent No. 6,341,342) and Klein et al. (U.S. Patent No. 5,671,439) and further in view of Jenkins (U.S. Patent No. 4,047,157).

Applicants submit that the present claims are patentable over any combination of Klein ('864), Jones, Thompson, Klein ('439), and Jenkins. Jenkins discloses that in the track/sector register, track address and sector address bit positions identify the track and sector on a disk to be involved in a transfer. In a fixed-head unit, the track address bits identify a specific head. See Jenkins col. 20, ll. 38-43. Jenkins further discloses that a write signal, produced in response to the function bits, enables drivers to load data onto the data set, which includes data wires and a data parity wire. See Jenkins col. 26, ll. 26-28. However, Jenkins does not suggest or disclose data written to and read from the first and second disk drives is interleaved so that even sectors are accessed on the first disk drive and odd sectors are accessed on the second disk drive.

As discussed above, Klein ('864), Jones, Thompson, and Klein ('439) do not suggest or disclose data written to and read from the first and second disk drives is interleaved so that even sectors are accessed on the first disk drive and odd sectors are accessed on the second disk drive, any combination of Klein ('864), Jones, Thompson, Klein ('439), and Jenkins would also not suggest or disclose data written to and read from the first and second disk

drives is interleaved so that even sectors are accessed on the first disk drive and odd sectors are accessed on the second disk drive. Therefore, the present application is patentable over Klein ('864), Jones, Thompson, and Klein ('439) in further view of Jenkins.

Claim 37 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Klein (U.S. Patent No. 6,567,864) and Jones et al. (U.S. Patent No. 5,619,723) and Thompson et al. (U.S. Patent No. 6,341,342) and Klein et al. (U.S. Patent No. 5,671,439) and further in view of Mizuno et al. (U.S. Patent No. 5,608,891).

Applicants submit that the present claims are patentable over any combination of Klein ('864), Jones, Thompson, Klein ('439), and Mizuno. Mizuno discloses that the outputs of the FIFOs are input to five AND gates and then the five signals are exclusive-ORed. See Mizuno col. 17, ll. 8-9. However, Mizuno does not suggest or disclose data written to and read from the first and second disk drives is interleaved so that even sectors are accessed on the first disk drive and odd sectors are accessed on the second disk drive.

As discussed above, Klein ('864), Jones, Thompson, and Klein ('439) do not suggest or disclose data written to and read from the first and second disk drives is interleaved so that even sectors are accessed on the first disk drive and odd sectors are accessed on the second disk drive, any combination of Klein ('864), Jones, Thompson, Klein ('439), and Mizuno would also not suggest or disclose data written to and read from the first and second disk drives is interleaved so that even sectors are accessed on the first disk drive and odd sectors are accessed on the second disk drive. Therefore, the present application is patentable over Klein ('864), Jones, Thompson, and Klein ('439) in further view of Mizuno.

Applicants respectfully submit that the rejections have been overcome and that the claims are in condition for allowance. Accordingly, applicants respectfully request the rejections be withdrawn and the claims be allowed.


The Examiner is requested to call the undersigned at (303) 740-1980 if there remains any issue with allowance of the case.

Please charge any shortage to our Deposit Account No. 02-2666.

Respectfully submitted,

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